DOCUMENT RESUME

ED 248 017 PS 014 500

AUTHOR Drewry, Debra L.; Clark, M. L.
TITLE Similarity and Reciprocity Effects on Friendship Preferences of Elementary School Children.
PUB DATE Apr 84
NOTE 22p.; Paper presented at the Annual Meeting of the Eastern Psychological Association (Baltimore, MD, April 12-15, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Age Differences; Elementary Education; *Elementary School Students; *Friendship; Grade 3; Grade 6; Interpersonal Attraction; *Peer Relationship; Self Concept
IDENTIFIERS Popularity; *Reciprocity; *Similarity

ABSTRACT

This study investigated the effect of similarity and reciprocity on dyadic friendship choices. Subjects were 34 third graders and 30 sixth graders. Reciprocal (mutual) and nonreciprocal (nonmutual) friendships were identified through use of the roster sociometric technique, whereby children choose their three best friends from an alphabetized list of classmates' names. Additionally, popularity and attractiveness scores were obtained, self-concept was measured, and data were obtained on peer interaction and family background variables. It was hypothesized that (1) children in reciprocal dyads would be more similar in verbal intelligence, total self-concept, overall popularity, physical attractiveness, and age than those in nonreciprocal relationships; (2) there would be a higher number of same-sex and same-race friendships in the reciprocal than in the nonreciprocal group; and (3) sixth graders would have more same-sex reciprocal friendships than would third graders. Results revealed that reciprocal friends were more similar in proximity, popularity, attractiveness, and self-concept than were nonreciprocal friends. Sixth-grade dyads were more similar in self-concept and popularity than third-grade dyads. In contrast with cross-sex and cross-race relationships, more same-sex and same-race relationships were found at both grade levels. Results were discussed in terms of social exchange and interpersonal attraction theories. (Author/RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED248017

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Similarity and Reciprocity Effects on Friendship Preferences of Elementary School Children

Debra L. Drewry

Temple University

M. L. Clark

Wake Forest University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Debra Drewry
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS 014500

Running Head: SIMILARITY AND RECIPROCITY EFFECTS

Paper presented at the annual meeting of the Eastern Psychological Association, Baltimore, Maryland, April, 1984.

Abstract

This study investigated the effect of similarity and reciprocity on dyadic friendship choices. Subjects were 34 third-graders and 30 sixth-graders. Reciprocal (mutual) and non-reciprocal (nonmutual) friendships were obtained from the roster sociometric technique. Reciprocal friendships were more similar in proximity, popularity, attractiveness and self-concept than those in non-reciprocal dyads. Main effects for grade were also present with sixth-grade dyads being more similar in self-concept and popularity than the third-grade dyads. More same-sex and same-race relationships existed for both grade levels. Results are discussed in relation to the social exchange and interpersonal attraction theories.

Similarity and Reciprocity Effects on Friendship

Preferences of Elementary School Children

Friendship is a social relationship that occurs between two people; it is an emotional bonding. Friendship formation is influenced by several social-psychological aspects according to the social exchange theory of Thibaut and Kelley (1959). First, people may enter and remain in relationships if the rewards exceed the cost effects. Second, friendships are positively affected by similarity in attitudes, race, sex, social status or physical attractivenss and proximity. Furthermore, maintenance of the friendship is dependent upon the participants' willingness to reciprocate the interaction on the basis of these qualities.

In support of the first two postulates of the social exchange theory (Thibaut & Kelley, 1959) research on friendship choices has found that children who were physically attractive, academic achievers, intelligent, latter-born, or high in their self-concept scores were preferred as friends (Barbe, 1954; Bradley & Newhouse, 1975; Glidewell, Kanto, Smith, & Stringer, 1966; Langlois & Stephen, 1977; McGuire & Weisz, 1982; Miller & Maruyama, 1976). Additionally, children select friends on the basis of similarity in sex, race, age, and social class (Asher, Gottman, & Oden, 1977; Glidewell, et al., 1966; Hallinan & Tuma, 1978; Singleton & Asher, 1979).

Many of the previous friendship studies have focused on the unidirectional selection of friends, although some studies have assessed the nature of mutual or reciprocal friendships (Kurdik & Krile, 1982; Newcomb & Brady, 1982). Nevertheless, there have been few attempts to assess similarity effects in reciprocal and non-reciprocal relationships. This study was conducted to determine the similarity of friends in the areas of intelligence, self-concept, attractiveness and various social variables. It was hypothesized that (1) children in reciprocal (mutual) dyads would be more similar in verbal intelligence, total self-concept, overall popularity, physical attractiveness, and age than those children in non-reciprocal (non-mutual or unilateral) relationships; (2) there would be a higher number of same-sex and same-race friendships in the reciprocal than in the non-reciprocal group; and (3) sixth-graders would have more same-sex reciprocal friendships than third-graders.

Method

Subjects

The subjects were 64 elementary school children, 34 third- and 30 sixth-graders, 32 males and 32 females. The third-graders ranged in age from 8 years, 5 months to 11 years, 2 months, and were from two classrooms. There were 17 males and 17 females; 38% were non-white. The sixth-graders were from one class, ranged in age from 11 years, 5 months to 13 years, 11 months, and 27% were non-white. There were 15 males and 15 females.

Measures

Children's friendship choices were measured by the roster sociometric technique whereby the children chose their three best friends from an alphabetized list of their classmates' names. Two types of dyads--reciprocal and non-reciprocal--were formed based on the children's friendship choices.

Three popularity scores were obtained from (1) the number of times each child was chosen as a friend according to the sociometric data, and from the children's nominations of classmates who were the (2) most likely to succeed in the future, and (3) most fun to be with.

Several friendship preference questions were asked in order to validate the children's friendship choices. Each child was asked to select one classmate for each of the following questions: Who they would like to look like, dress like, sit next to during lunch, and have the most fun playing with.

Three attractiveness scores were determined from the children's nominations of classmates for nicest clothes, neatest, and most handsome boys or the prettiest girls. The popularity and attractiveness scores were determined by calculating the number of times each child was nominated for each of these questions and transforming this data into percentage scores.

The Primary-Self Concept Inventory (Muller & Leonetti, 1974) was administered to assess personal, social, intellectual, and total self-concept. The test contained illustrations of a child

or children in 20 different positive and negative situations. The children in this study were instructed to select the picture for each situation that was most representative of them.

Two questionnaires were devised to obtain data on peer interaction and family background. One questionnaire solicited information from the children about their proximity to and frequency of extracurricular interaction with classmates. The children were asked to list the names of their classmates who lived nearby, attended the same church or scout troop, or participated in the same individual or group team sports. Six scores resulted from this measure for each dyad, one from each of the five questions and one from the total number of common extracurricular interaction activities.

The second questionnaire collected data from the children on their birth order, number of siblings, family configuration (single or intact) and socioeconomic status. Socioeconomic status was determined by the parents' occupations and was calculated from the occupational subscale of the Hollingshead Two-Factor Index of Social Position (Hollingshead, 1957).

The children's level of verbal intelligence was individually assessed by the Peabody Picture Vocabulary Test (Dunn, 1965) which measures receptive vocabulary.

Procedure

Each child was individually administered the PPVT, background information questionnaire, and the friendship preference questions.

The sociometric measure, Primary Self-Concept Inventory, and the questionnaires to assess popularity, attractiveness, and extracurricular interaction were administered in a group session. All measures were administered by trained examiners.

Results

Dyads were formed and classified as either reciprocal or non-reciprocal on the basis of the mutuality of the children's friendship choices. The dyads in the reciprocal group were those children who chose each other as best friends (mutual friendships) while the non-reciprocal group contained those children who did not receive any reciprocated choices (nonmutual dyads) as friend. As a result of this categorization, there were 50 reciprocal and 39 non-reciprocal dyads. It was possible for a child to be in more than one dyad. The score for each variable, for each dyad, was the difference between the children's scores in that dyad. Also, dyads were classified as either same or different in sex, race, and family configuration.

Two-way ANOVAs were calculated with reciprocity and grade level as independent variables, the total extracurricular interaction scores and the difference scores from the measures of intelligence, self-concept, popularity, attractiveness, and socioeconomic status as the dependent variables. The reciprocal and non-reciprocal groups differed on 6 variables: overall popularity, $F(1, 85) = 40.58$, $p < .001$, fun to be with, $F(1, 85) =$

22.22, $p < .001$, personal self-concept, $F(1, 85) = 15.49$, $p < .001$, future success, $F(1, 85) = 6.40$, $p < .05$, total self-concept, $F(1, 85) = 5.79$, $p < .05$, and physical attractiveness, $F(1, 85) = 4.58$, $p < .05$; see Table 1 for the mean scores. The children in the reciprocal dyads were more similar on these measures than the non-reciprocal pairs. Three of the five hypothesized variables--total self-concept, overall popularity, and physical attractiveness--were in the predicted direction.

Insert Table 1 about here

Main effects for grade indicated that sixth-grade dyads had more similar scores for fun to be with, $F(1, 85) = 17.21$, $p < .001$, overall popularity, $F(1, 85) = 10.71$, $p < .005$, future success, $F(1, 85) = 6.52$, $p < .05$, and social self-concept, $F(1, 85) = 5.31$, $p < .05$, than third-grade pairs while the latter had more similar personal self-concept scores, $F(1, 85) = 9.13$, $p < .005$, than sixth-grade dyads (see Table 2).

Insert Table 2 about here

A significant reciprocity by grade interaction for total extracurricular interaction, $F(1, 85) = 6.00$, $p < .05$, revealed that the greatest interaction occurred between sixth-grade dyads in the reciprocal group ($\bar{X} = 1.08$) and the least interaction between reciprocal third-grade friendship pairs ($\bar{X} = .29$).

A discriminant analysis with reciprocity as the criterion variable revealed that overall popularity, $F(1, 87) = 42.31$, personal self-concept, $F(1, 87) = 32.81$, fun to be with, $F(1, 87) = 23.56$, nicest clothes, $F(1, 87) = 19.99$, future success, $F(1, 87) = 17.14$, age, $F(1, 87) = 15.13$, neatest, $F(1, 87) = 13.60$, total self-concept, $F(1, 87) = 12.16$, socioeconomic status, $F(1, 87) = 10.94$, and social self-concept, $F(1, 87) = 9.98$, significantly discriminated between the reciprocal and non-reciprocal groups, all significant at the .001 level (see Table 3). The reciprocal dyads were more similar than the non-reciprocal pairs on all of these variables except age. The first discriminant function was significant, $\chi^2(10) = 57.58$, $p < .001$. These ten discriminators correctly classified 96% of the reciprocal dyads, 87% of the non-reciprocal dyads, and 92% of the total number of dyads.

Insert Table 3 about here

Chi-square analyses indicated that there were no significant differences in the sex, race, or family configuration of the dyads based on reciprocity or grade level, although means were in the expected direction. Thus, the second and third hypotheses were not supported. In the reciprocal and non-reciprcoal groups, the percentages of same-sex dyads were 94 and 82, and of same-race dyads were 69 and 57, respectively. Additional chi-square analyses

calculated for each of the five extracurricular interaction questions showed that 42% of the reciprocal and only 13% of the non-reciprocal pairs lived close to each other, $\chi^2(1) = 7.66$, $p < .01$.

Discussion

Similarity played an important role in the friendship selection of the elementary children in this study. Those in reciprocal relationships selected classmates who were similar to themselves in popularity, self-concept and physical attractiveness. When mutual friendships occurred it seemed that the two friends had alot in common. Not only were their personalities similar but they were perceived by their peers in similar ways, especially in the areas of popularity and attractiveness. The similarity finding strongly supports the adult interpersonal attraction theories (Duck, 1977; Houston, 1974) that insist that similarity along with familiarity and proximity are the basic determinants of friendships. The findings also offer support for the matching hypothesis. Berscheid and Walster (1974) proposed that when seeking marriage partners people select a mate by matching characteristics such as physical attractiveness. The matching process is useful because it helps to lessen the possibility of rejection and possible damage to the self-esteem. The same phenomena occurs for children, as reflected by the greater similarity of mutual than non-mutual friends.

Proximity was also related to friendship choices; those children who had reciprocal relationships lived closer to each other than those in the non-reciprocal relationships. Festinger, Schachter,

& Back (1950) proposed that proximity helped to facilitate friendship formation by increasing contact which ultimately may have an effect on liking. Aller (1981) goes a step further to say that "the nature of the community and the residential area (demography, apartments or single-dwelling units, etc.) affects the structure and outcomes of a child's friendships" (p. 191). These findings also support the notion of the social exchange theory (Thibaut & Kelley, 1959) that both similarity and reciprocity are crucial for the maintenance of mutual friendships.

The non-reciprocal dyads seemed to be less accurate in assessing and selecting friends than the reciprocal dyads. Instead of choosing classmates who were of a similar status, they selected as friends those who were socially desirable and thus more popular and attractive than themselves. Their attempts to seek association with higher status peers may be a way of enhancing their own status and likability within their class. A perceived relationship with a high status peer may serve to create a feeling of being socially accepted when actually those children with no reciprocal relationships are social outcasts.

The sixth-grade dyads appeared to be more similar than the third-grade dyads in the areas of self-concept and popularity. These findings suggest that the nature of friendships may change with increasing age which is supported by the friendship stage theories (Bigelow, 1977; Peevers & Secord, 1973; Selman & Jacquette, 1977). Fine (1981) who studied preadolescent friendships, theorized

that preadolescence (ages 7 to 12) is a significant period for friendship development because children are thrust into a peer environment (e.g. school) and must use that environment to help validate self-concept. To receive positive feedback one must be capable of selecting friends that have similar characteristics and attitudes and thus can give feedback that is consistent with one's own self-concept. The ability to select mutual friends may increase with age. In addition, as children increase cognitively they can better assess their peers' viewpoints and thus look for internal personal characteristics in friendship selection. Thus the better evaluation capability of older children is illustrated by the present sixth-graders ability to select friends that were more similar to themselves than the third-graders.

Past research has shown that even though cross-sex and cross-race relationships occur in preschool and elementary school, same-sex and race friends are more prevalent (Asher, Gottman, & Oden, 1977; Drewry, & Clark, in press; Hallinan & Tuma, 1978; Schofield & Sagar, 1977; Singleton & Asher, 1979). Schofield (1981) suggested that "sex is generally a more potent grouping factor than race" (p. 62) and the present findings support this statement. The high frequency of same-sex and same-race friendship choices, regardless of reciprocity groupings, suggests that similarity was a more important criteria for friendship selection than mutuality. Consequently, the second hypothesis,

that more same-sex and same-race preferences would be present in the reciprocal than the non-reciprocal group was not supported.

Several studies (Hartup, 1970; Ladd & Oden, 1979; St. John & Lewis, 1975; Singleton & Asher, 1979) have indicated that a sex cleavage in friendships occurs during the elementary school years. However, there appears to be some inconsistency in determining at which age the sex cleavage is most prominent. Singleton and Asher (1979) found no difference between the third- and sixth-graders' ratings for sex of peers in work and play situations; children in both grades rated same-sex classmates higher than cross-sex peers. These findings imply that the sex cleavage remained constant throughout the elementary school years. In contrast, Ladd and Oden (1979) found that fifth-graders rated more same-sex than cross-sex classmates for work and play activities than third-graders. Their findings suggest that although the sex cleavage was present by the third-grade it became more prevalent throughout elementary school.

The results of the present study did not support the stated hypothesis but instead confirmed the results of the Singleton and Asher (1979) study; preference for same-sex peers as friends did not increase from the third to the sixth grade. The high frequency of same-sex friendships throughout the preschool and elementary school years has been explained by the early development of different interests and values by boys and girls (Dweck, 1981).

Girls are more involved in prosocial behavior in small groups while boys participate in competitive games with a large number of peers. These different interaction styles begin during the preschool years and become more distinctive during the elementary school years as organized sports (e.g. soccer, football, basketball) and other groups (e.g. Girl Scouts, Boy Scouts) tend to further segregate the sexes. The present findings do imply that same-sex peers are important for enhancing interpersonal communication, self-disclosure and as part of the socialization process throughout the formative years (see Suttles, 1970).

In summary, the greater similarity and proximity of the reciprocal friends supports the social exchange theory (Thibaut & Kelley, 1959) and theories of interpersonal attraction (Duck, 1977; Houston, 1974). Also, sex and race appeared to be more important determinants of friendship selection than mutuality. Lastly, when reciprocity in friendship selection did not exist, children chose classmates of higher social status to possibly enhance their social desirability.

References

Allen, V. (1981). Self, social group, and social structure: Surmises about the study of children's friendships. In S. Asher & Gottman (Eds.). The development of children's friendships. Cambridge: Cambridge University Press.

Asher, S. R., Gottman, J. M., & Oden, S. L. (1977). Children's friendships in school settings. In L. G. Katz (Ed.), Current topics in early childhood education (Vol. 1). Norwood, NJ: Ablex.

Barbe, W. B. (1954). Peer relationships of children of different intelligence levels. School and Society, 80, 60-62.

Berscheid, E., & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (Ed.), Advances in experimental social psychology. New York: Academic Press.

Bigelow, B. (1977). Children's friendship expectations: A cognitive-developmental study. Child Development, 48, 246-253.

Bradley, P. O., & Newhouse, R. C. (1975). Sociometric choice and social perceptions of upper elementary school children. Psychology in the Schools, 12, 219-222.

Drewry, D. L., & Clark, M. L. (in press). Factors important in the formation of preschoolers' friendships. Journal of Genetic Psychology.

Duck, S. (1977). Theory and practice in interpersonal attraction. London: Academic Press.

Dunn, L. M. (1965). Peabody Picture Vocabulary Test. Circle Pines, MN: American Guidance Service.

Dweck, C. S. (1981). Social-cognitive processes in children's friendships. In S. R. Asher & J. M. Gottman (Eds.), The development of children's friendships. Cambridge: Cambridge University Press.

Festinger, L., Schachter, S., & Back, K. (1950). Social pressure in informal groups. New York: Harper.

Fine, G. (1981). Friends, impression management, and preadolescent behavior. In S. Asher, & J. Gottman (Eds.), The development of children's friendships. Cambridge: Cambridge University Press.

Glidewell, J. C., Kantor, M. D., Smith, L. M., & Stringer, L. A. (1966). Socialization and social structure in the classroom. In L. W. Hoffman & M. L. Hoffman (Eds.), Review of child development research. New York: Russell Sage Foundation.

Hallinan, M. T., & Tuam, N. (1978). Race differences in children's friendliness. Sociology of Education, 51, 270-282.

Hartup, W. W. (1970). Peer interaction and social organization. IN P. H. Mussen (Ed.), Carmichael's manual of child psychology (Vol. 2). New York: Wiley.

Hollingshead, A. B. (1957). Two-Factor Index of Social Position. Unpublished Manuscript.

Houston, T. (Ed.). (1974). Foundations of interpersonal attraction. New York: Academic Press.

Kurdek, L., & Krile, D. (1982). A developmental analysis of the relationship between peer acceptance and both interpersonal understanding and perceived social self-competence. Child Development, 53, 1485-1491.

Ladd, G., & Oden, S. (1979). The relationship between peer acceptance and children's ideas about helpfulness. Child Development, 50, 402-408.

Langlois, J. H., & Stephan, C. (1977). The effects of physical attractiveness and ethnicity on children's behavioral attributes and peer preferences. Child Development, 48, 1694-1698.

McGuire, K. D., & Weisz, J. R. (1982). Social cognition and behavior correlates of preadolescent chumship. Child Development, 53, 1478-1484.

Miller, N., & Maruyama, G. (1976). Ordinal position and peer popularity. Journal of Personality and Social Psychology, 33, 123-131.

Muller, D. G., & Leonetti, R. (1974). Primary Self-Concept Inventory. Austin, TX: Learning Concepts.

Newcomb, A., & Brady, J. (1982). Mutuality in boys' friendship relations. Child Development, 53, 392-395.

Peevers, B., & Secord, P. (1973). Developmental changes in attribution of descriptive concepts to persons. Journal of Personality and Social Psychology, 27, 120-128.

Priest, R., & Sawyer, J. (1967). Proximity and peership: Bases of balance in interpersonal attraction. American Journal of Sociology, 72, 633-49.

St. John, N., & Lewis, R. (1975). Race and the structure of the elementary school classroom. Sociology of Education, 48, 346-368.

Schofield, J., & Sagar, H. (1977). Peer interaction in an integrated middle school. Sociometry, 40, 130-138.

Selman, R., & Jacquette, D. (1977). Stability and oscillation in interpersonal awareness: A clinical-developmental analysis. In C. B. Keasey (Ed.), The Nebraska symposium on motivation (Vol. 25). Lincoln, Nebraska: University of Nebraska Press.

Singleton, L. C., & Asher, S. R. (1979). Racial integration and children's peer preferences: An investigation of developmental and cohort differences. Child Development, 50, 936-941.

Suttles, G. (1970). Friendship as a social institution. In G. McCall, N. Denzin, G. Suttles, & S. Kurth (Eds.). Social relationships. Chicago: Aldine.

Thibaut, J. W., & Kelley, H. H. (1959). The social psychology of groups. New York: Wiley.

Table 1

Difference Score Means for Reciprocity Groupings on the Significant Dependent Measures

Dependent Measures	Reciprocal	Non-reciprocal
**Overall popularity	9.98	25.54
**Fun to be with	10.50	21.75
**Personal self-concept	.74	1.69
*Future success	13.20	21.59
*Total self-concept	2.16	3.49
*Physical attractiveness	22.82	32.23
n	50	39

Note. The smaller the mean score, the greater the similarity in the dyads.

*$p < .05$. **$p < .001$.

Table 2

Differences Score Means for the Significant Dependent Measures by Grade Level

	Third	Sixth	p
Fun to be with	20.10	9.95	.001
Overall popularity	21.13	11.73	.005
Personal self-concept	.94	1.54	.005
Future success	20.75	12.34	.05
Social self-concept	1.83	1.12	.05
n	48	41	

Note. The smaller the mean score, the greater the similarity in the dyads.

Table 3

Discriminant Analysis on Difference Scores with Reciprocity as the Criterion Variable

Predictors	Group Means	
	Reciprocal	Non-reciprocal
Intelligence	14.14	14.79
*Total self-concept	2.16	3.49
*Personal self-concept	.84	1.69
*Social self-concept	1.32	1.74
Intellectual self-concept	.88	1.08
*Overall popularity	9.98	22.54
*Future success	13.20	21.59
*Fun to be with	10.50	21.74
Physical attractiveness	22.82	32.23
*Neatest	13.02	16.49
*Nicest clothes	14.72	18.87
*Age	7.28	5.79
Birth order	1.56	1.26
Number of siblings	1.40	1.38
*Socioeconomic status	1.62	1.92
Extracurricular interaction	.70	.44
n	50	39

Note. The smaller the mean score the greater the similarity in the dyads. The extracurricular interaction is not a difference score but indicates the total amount of dyad interaction. The smaller mean score indicates less interaction.

*$p < .001$.